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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,152	03/28/2001	Mohammed Nafie	TI-30834	3960
23494	7590	09/28/2004	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			BOAKYE, ALEXANDER O	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/820,152

Applicant(s)

NAFIE ET AL.

Examiner

ALEXANDER BOAKYE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The body of claim 9 is incorrectly numbered since sub-numbers contain similar alphabet, (b). Correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fattouche et al. (US Patent # 5,282,222).

Regarding claim 1, Fattouche teaches a method of wireless communication (Fig. 13b), comprising the steps of: (a) transmitting a first packet on a transmission channel to a transceiver (column 17, lines 38-39); (b) receiving a second packet on a transmission channel from the transceiver (column 17, lines 40-41), the second packet including information regarding the transmission channel to the transceiver (column 17,

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lines 34-44; the claimed second packet corresponds to frame 2 of Fig. 12); (c) measuring the transmission channel from the transceiver (see Fig. 7b for measurement of transmission channel from the transceiver); (d) calculating calibration factors for the transmission channel to the transceiver (column 9, lines 48-68; pre-distortion unit 834 adjustment of the transmitted power to an appropriate signal level reads on the claimed calculating calibration factors; see Fig. 7b ) using the information from step (b) and the measurement from step (c); and (e) for transmitting a third packet on the transmission channel to the transceiver (column 17, lines 34-44 ), estimating the transmission channel to the transceiver from the calibration factors and a second measurements of the transmission channel from the transceiver (column 9, lines 43-68; see Fig. 7b).

Regarding claims 2 and 3, Fattouche teaches that the calibration factors include a gain factor and a phase shift factor (column 11, lines 49-51; the claimed gain factor is inherent in the pre-distortion unit for adjusting the transmitted power to appropriate signal level).

Regarding claim 4, Fattouche teaches that the phase shift factor is the difference of an overall phase shift for transmission to the transceiver minus an overall phase shift for transmission from the transceiver (column 11, lines 64-column 12, lines 1-3; see Fig. 7a).

Regarding claim 5, Fattouche teaches that the transmitting is in a time division duplex mode (column 17, lines 34-37; see Fig. 12).

Regarding claim 6, Fattouche teaches that the first packet includes a request for the transceiver to respond with information regarding the transmission channel to the transceiver (column 17, lines 34-44; see Fig. 12).

Regarding claim 7, Fattouche teaches updates of the information from the transceiver (column 18, lines 14-17; pre-distorter adjustment of transmitted power signal is an indicator of signal updates since the transmitted power signal level changes in value after adjustment).

Regarding claim 8, Fattouche teaches a wireless communication system (Fig. 13b) comprising: (a) a master Transceiver for a communication channel (the claimed master Transceiver corresponds to base station central controller; column 18, line 66-column 19, lines 1-7); (b) a slave transceiver for the communication channel (column 18, line 66-column 19, lines 1-7 ;the claimed slave transceiver is comparable to the portables as evidenced by Fattoche); (c) wherein the master transmits to the slave using estimates for the communication channel calculated from measurements of the communication channel for transmission received from slave together with calibration factors from prior measurements of the communication channel by the slave and the master (column 18, lines 1-17; see Figs. 7a and 7b).

Regarding claim 9, Fattouche teaches a wireless communication transceiver (Fig. 13b), comprising: (a) a transmitter (column 17, lines 50-54; see Fig. 13a); (b) a receiver coupled to the transmitter (column 17, lines 50-54; Fig. 13b contains transceiver with receiver coupled to the transmitter); (b) the transmitter including a channel estimator (830, Fig. 13b) and a wave shaper ( 816, Fig. 13b) for transmitting to

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a transceiver, wherein the channel estimator estimates the channel to the transceiver from measurements of the channel from the transceiver together with calibration factors from channel information received from the transceiver (column 18, lines 1-17; see Figs. 7a and 7b).

### Conclusion

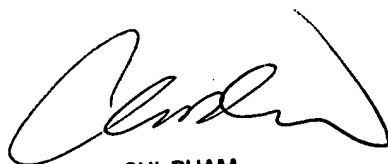
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-4750.

Alexander Boakye

AB

Patent Examiner

9/17/04



CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 9/27/07